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## NOTICE OF ALLOWANCE AND FEE(S) DUE

29683 7590 06/05/2008

HARRINGTON & SMITH, PC  
4 RESEARCH DRIVE  
SHELTON, CT 06484-6212

EXAMINER

LAZARO, DAVID R

ART UNIT

PAPER NUMBER

2155

DATE MAILED: 06/05/2008

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/674,843

09/29/2003

Fan Lu

871.0113.U1(US)

4473

TITLE OF INVENTION: USB APPLICATION ADOPTING BLUETOOTH PROFILE WITH A SHARING IMPLEMENTATION

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1440	\$300	\$0	\$1740	09/05/2008

**THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.**

**THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.**

### HOW TO REPLY TO THIS NOTICE:

#### I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.**

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Commissioner for Patents  
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**INSTRUCTIONS:** This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

29683 7590 06/05/2008

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Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

## **Certificate of Mailing or Transmission**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,843	09/29/2003	Fan Lu	871.0113.U1(US)	4473

**TITLE OF INVENTION:** USB APPLICATION ADOPTING BLUETOOTH PROFILE WITH A SHARING IMPLEMENTATION

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1440	\$300	\$0	\$1740	09/05/2008

EXAMINER	ART UNIT	CLASS-SUBCLASS
LAZARO, DAVID R	2155	709-227000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 \_\_\_\_\_
- (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 \_\_\_\_\_
- 3 \_\_\_\_\_

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies \_\_\_\_\_

4b. Payment of Fee(s); (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number \_\_\_\_\_ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

**NOTE:** The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature \_\_\_\_\_

Date \_\_\_\_\_

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Registration No. \_\_\_\_\_

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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10/674,843	09/29/2003	Fan Lu	871.0113.U1(US)	4473
29683	7590	06/05/2008	EXAMINER	
HARRINGTON & SMITH, PC 4 RESEARCH DRIVE SHELTON, CT 06484-6212			LAZARO, DAVID R	
			ART UNIT	PAPER NUMBER
			2155	
DATE MAILED: 06/05/2008				

## Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 1023 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 1023 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

**Notice of Allowability**

Application No.

10/674,843

Applicant(s)

LU ET AL.

Examiner

Art Unit

DAVID LAZARO

2155

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed 01/25/2008.
2. ☒ The allowed claim(s) is/are 1-33.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- \* Certified copies not received: \_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |   |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application                     |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date ____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br>Paper No./Mail Date ____     | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                   |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance  |
|  | 9. <input type="checkbox"/> Other ____.   |

/David Lazaro/  
Primary Examiner, Art Unit 2155

### **DETAILED ACTION**

1. The oath filed 01/25/2008 is accepted by the examiner.
2. The rejection of claim 18 under 35 USC 112, second paragraph, is withdrawn based on applicant's amendment.

### **EXAMINER'S AMENDMENT**

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Harry Smith (32,493) on 04/30/2008.

The application has been amended as follows:

Please amend the claims according to the attached listing of claims.

### ***Examiner Comments***

4. The claim language regarding the "managing" of the transport connection js removed in the examiner's amendment for clarifying purposes. Particularly, it was not clear as to how the "managing" in the preamble was being achieved in relation to the subject matter in the body of the claim. After discussions with the applicant, it was decided to remove the "managing" language in order to clarify the overall invention.

***Allowable Subject Matter***

5. Based on the examiner's amendment, Claims 1-33 are allowed.
6. The following is an examiner's statement of reasons for allowance: The primary reasons for allowance is the inclusion of the following limitations in each of the independent claims where a transport layer connection is created through a service management request and protocol registration:

“ adopting with the at least one created transport layer connection at least one profile from one transport protocol to another different transport protocol; and  
reusing at least one profile component from the one transport protocol for the another different transport protocol via a short range connectivity management mechanism” (as from claim 1, similar limitations in claims 16, 17, 24, 30)

This subject matter is not found in the prior art, nor is it obvious in view of the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID LAZARO whose telephone number is (571)272-3986. The examiner can normally be reached on 8:30-5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar can be reached on 571-272-4006. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David Lazaro/  
Primary Examiner, Art Unit 2155

EXAMINER'S AMENDMENT TO THE CLAIMS:

This listing of the claims will replace all prior versions, and listings, of the claims in this application.

Listing of Claims:

1. (Currently Amended) A method ~~for managing at least one transport connection~~ comprising:

providing a generic architecture management framework;

creating at least one transport layer connection, comprising receiving a service management request and performing protocol registration through at least one of a socket server and a communication server;

adopting with the at least one created transport layer connection at least one profile from one transport protocol to another different transport protocol;  
and

reusing at least one profile component from the one transport protocol for the another different transport protocol via a ~~central~~ short range connectivity management mechanism.

2. (Original) A method as in claim 1, where one protocol is a Bluetooth protocol.

3. (Original) A method as in claim 1, where one protocol is a Universal Serial Bus protocol.



4. (Original) A method as in claim 1, where one protocol is an Infrared Data Association protocol.
5. (Original) A method as in claim 1, where one protocol is an RS232 protocol.
6. (Original) A method as in claim 1, where one protocol is a wireless protocol.
7. (Previously Presented) A method as in claim 1, where one protocol is a wired protocol.
8. (Original) A method as in claim 1, where the generic architecture framework comprises an object exchange related service.
9. (Currently Amended) A method as in claim 1, wherein ~~managing the at least one transport connection comprises providing~~ the short range connectivity management mechanism comprises a short range connectivity application, application engine and generic platform.
10. (Currently Amended) A method as in claim 1, ~~wherein managing the at least one transport connection further comprises~~ comprising performing service registration and discovery.
11. (Currently Amended) A method as in claim 1, ~~wherein managing the at least one transport connection further comprises~~ comprising loading a connectivity component to perform channel reservation and service registration for a Bluetooth protocol.
12. (Currently Amended) A method as in claim 1, ~~wherein managing the at least one transport connection further comprises~~ comprising loading a connectivity component to perform channel reservation and service registration for a Universal Serial Bus protocol.

Art Unit: 2155

13. (Currently Amended) A method as in claim 1, ~~wherein managing the at least one transport connection~~ further ~~comprises~~ comprising establishing a link between an object exchange data link library and a service controller.

14. (Currently Amended) A method as in claim 1, ~~wherein managing the at least one transport connection~~ further ~~comprises~~ comprising providing an application programming interface to manage at least one service for a Bluetooth protocol.

15. (Currently Amended) A method as in claim 1, ~~wherein managing the at least one transport connection~~ further ~~comprises~~ comprising providing an application programming interface to manage at least one service for a Universal Serial Bus protocol.

16. (Currently Amended) A computer readable medium storing program instructions for directing a computer to perform operations that comprise:

creating at least one transport layer connection, comprising receiving a service management request and performing protocol registration through at least one of a socket server and a communication server;

processing transport layer initialization, connection, and registration functionality;

adopting with the at least one created transport layer connection at least one profile from one transport protocol to another different transport protocol;  
and

reusing at least one profile component from the one transport protocol the another different transport protocol via a ~~central~~ short range connectivity management mechanism.

Art Unit: 2155

17. (Previously Presented) A mobile terminal, comprising a wireless transceiver, a data processor, and a memory for use in communicating with at least one of a wired and a wireless protocol utilizing a transport software subsystem that is used in common with a plurality of transport protocols, where said transport software subsystem comprises an architecture management framework configurable to create at least one transport layer connection, comprising receiving a service management request and performing protocol registration through at least one of a socket server and a communication server, where the created at least one transport layer connection is configured to adopt at least one profile from one transport protocol to another different transport protocol and to reuse at least one profile component from the one transport protocol for the another different transport protocol.

18. (Previously Presented) A mobile terminal as in claim 17, where the transport software subsystem operates in conjunction with an operating system.

19. (Original) A mobile terminal as in claim 18, where the operating system comprises a Symbian operating system.

20. (Original) A mobile terminal as in claim 17, where one protocol is a Bluetooth protocol.

21. (Original) A mobile terminal as in claim 17, where one protocol is a Universal Serial Bus protocol.

22. (Previously Presented) A mobile terminal as in claim 17, where the transport software subsystem provides an application programming interface to manage at least one service for a Bluetooth protocol.

Art Unit: 2155

23. (Previously Presented) A mobile terminal as in claim 17, where the transport software subsystem provides an application programming interface to manage at least one service for a Universal Serial Bus protocol.

24. (Currently Amended) A method ~~for managing at least one transport connection~~ comprising providing a generic architecture management framework, creating at least one transport layer connection, comprising receiving a service management request and performing protocol registration through at least one of a socket server and a communication server, adopting with the at least one created transport layer connection at least one profile from one transport protocol to another different transport protocol, and reusing at least one profile component from the one transport protocol for the another different transport protocol, wherein creating a transport layer connection comprises receiving a service management request and performing protocol registration through at least one of a socket server and a communication server.

25. (Previously Presented) A method as in claim 24, where the one protocol is one of an Infrared Data Association protocol, an RS232 protocol, an OBEX protocol, an USB protocol and a Bluetooth protocol.

26. (Previously Presented) A method as in claim 24, where the created transport layer connection comprises a wired connection.

27. (Previously Presented) A method as in claim 24, where the created transport layer connection comprises a wireless connection.

28. (Currently Amended) A method as in claim 24, ~~where managing the at least one transport connection comprises~~ further comprising providing a short range connectivity application, application engine and generic platform.

Art Unit: 2155

29. (Currently Amended) A method as in claim 24, ~~where managing the at least one transport connection comprises~~ further comprising performing service registration and discovery.

30. (Previously Presented) An apparatus comprising:

means for creating at least one transport layer connection, comprising means for receiving a service management request and performing protocol registration through at least one of a socket server and a communication server;

means for adopting with the at least one created transport layer connection at least one profile from one transport protocol to another different transport protocol; and

means for reusing at least one profile component from the one transport protocol for the another, different transport protocol; and

~~means for receiving a service management request and performing protocol registration through at least one of a socket server and a communication server.~~

31. (Previously Presented) An apparatus as in claim 30, where the one protocol is one of an Infrared Data Association protocol, an RS232 protocol, an OBEX protocol, an USB protocol and a Bluetooth protocol.

32. (Previously Presented) An apparatus as in claim 30, where the created transport layer connection comprises a wired connection.

33. (Previously Presented) An apparatus as in claim 30, where the created transport layer connection comprises a wireless connection.